

# AEVT500 Series DC Contactor Specification



## Product Facts

- Versatile power, voltage, and current operating range: 12-1800 Vdc;
- Excellent for safety disconnect and transfer switch applications;
- Built-in dual power coil economizer, 8w holding typical
- Hermetically “Super-sealed” environment uniquely protects contacts and all moving parts; can operate in harsh environment
- Auxiliary contacts optional
- 360KW power switch capable



## Nomenclature

Example

AEVT500 –

C

A

Series code:

“AEVT500”=AEVT500 series

Coil Voltage Code:

“B” = 12 VDC

“C” = 24 VDC

Options:

Blank = Std. Options (Bottom Mount, Without Aux. Contact & Polarized Load Terminals)

“A” = With Aux. Contact (SPST-NO)

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## Performance Data

MAIN CONTACT	LIFE	DATA	
Contact arrangement	1 Form X (SPST-NO DM)	500A @ 450VDC (make/break)	3,000 cycles
Rated Operating Voltage	12-1,800VDC	500A @ 650VDC (make/break)	1,000 cycles
Continuous (Carry) Current	500A <sup>1</sup>	Mechanical life	200,000 cycles
<b>AUX. CONTACT</b>			
Max short circuit current	3,300A @ 320VDC (1 cycle)	Aux. Contact Arrangement	SPST-NO (1 Form A)
Dielectric Withstanding Voltage	Between open contacts: 4,000VDC (leakage ≤ 1mA)	Aux. Contact Rating (Max Wattage)	10W
	Between contact and coil: 2,200Vrms (leakage ≤ 1mA)	Aux. Contact Rating (Max Voltage)	100 VDC
Insulation Resistance	Terminal to Terminal / Terminal to Coil	Aux. Contact Resistance (Max)	500mΩ
	New: Min 100MΩ @500VDC		
Voltage Drop (@350A)	≤ 70mV		
<b>ENVIRONMENTAL DATA</b>		<b>OPERATE / RELEASE TIME</b>	
Shock, 11ms ½ sine, operating	20G Peak	Close (includes bounce)	40ms, Max.
Vibration, Sine, Peak, 20G	10–1,000Hz	Release	20ms, Max.
Operating Ambient Temperature	-40 to +85°C		
Weight	3.38 lb (1.53 kg)		
<b>COIL DATA</b>			
<b>Voltage rating</b>		<b>12Vdc</b>	<b>24Vdc</b>
Pickup voltage (25 °C)		9.9Vdc	19.7Vdc
Dropout voltage (25 °C)		2Vdc	4Vdc
Inrush current @ nominal voltage <sup>2</sup>		3.3A	1.7A
Holding current @ nominal voltage <sup>2</sup>		0.74A	0.37A

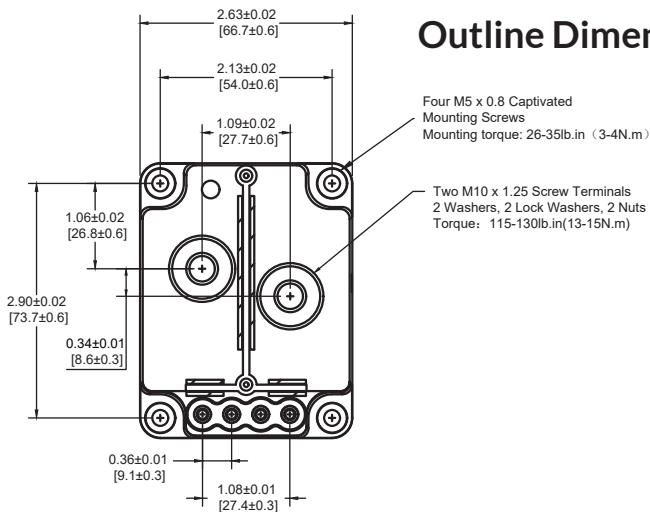
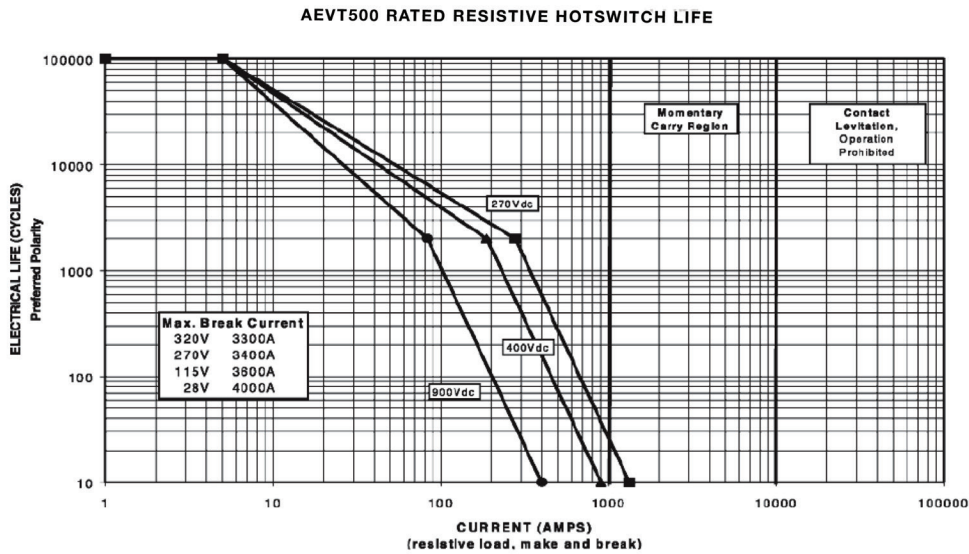
### Note:

\*1: Current is relevant to cross-sectional area of conductor.

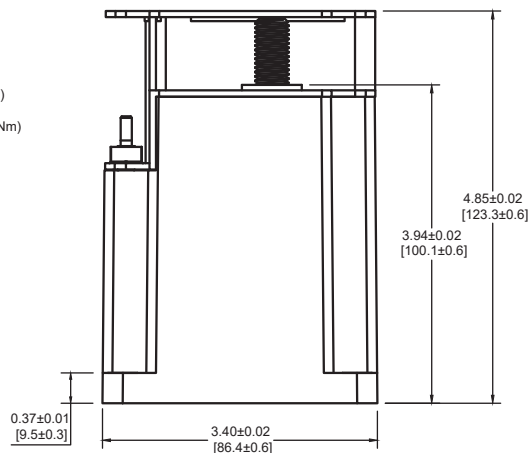
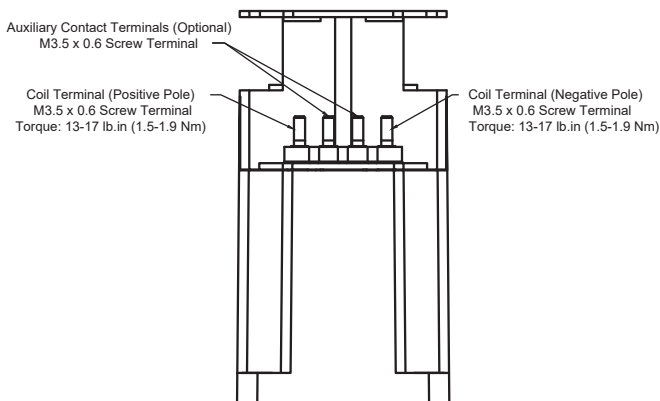
\*2: Two coil design

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## Contact Rating. Estimated Make & Break Resistive Load Ratings



## Outline Dimensions: inches (mm)



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## Application Note:

1. Be sure to use washer to prevent screws from loosening, all the terminals or copper bar must be in direct contact with the contactor's terminals.
  - Contact Terminal Torque: 115 - 130 lb.in (13 - 15 N.m)
  - Mounting Torque: 26 - 35 lb.in (3 - 4 N.m)
2. Contact terminals are polarized so refer to drawing during connecting. There is a reverse surge absorption circuit so that it is not necessary to use a surge protective device.
3. Do not use if dropped.
4. Avoid installing in a strong magnetic field (close to a transformer or magnet), or near a heat source.
5. Electrical life  
Use per load capability and life cycle limits so as not to cause a function failure (treat the contactor as a product with specified life and replace it when necessary). It is possible to make parts burn around the contactor once operating failure occurs. It is necessary to take layout considerations into account and to make sure power shall be cut off within 1 second.
6. Avoid debris or oil contamination of the main terminals to optimize contact and avoid excess heat generation.